ANSCI 153 Course Outline as of Fall 2014

CATALOG INFORMATION

Dept and Nbr: ANSCI 153 Title: SUS ANIMAL PROD
Full Title: Sustainable Agriculture Production Systems with Animals
Last Reviewed: 2/7/2022

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00 Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
This course covers the integration of livestock as part of a sustainable farming system with emphasis on small-scale production for niche markets and pasture based systems. Topics included are appropriate breed selection, nutrition and living requirements for livestock such as goats, hogs, sheep, poultry and cattle. Upon completion, student should recognize current applications of sustainable animal agriculture including the challenges of animal production, animal needs, animal welfare and protection of the environment and resources for future food supply systems.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: This course covers the integration of livestock as part of a sustainable farming system with emphasis on small-scale production for niche markets and pasture based systems.

Topics included are appropriate breed selection, nutrition and living requirements for livestock such as goats, hogs, sheep, poultry and cattle. Upon completion, student should recognize current applications of sustainable animal agriculture including the challenges of animal production, animal needs, animal welfare and protection of the environment and resources for future food supply systems. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Major Applicable Course

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Recognize and explain current applications of sustainable animal agriculture including the challenges of animal production, animal needs, animal welfare and protection of the environment and resources for future food supply systems.

Objectives:
Upon completion of the course, students will be able to:
1. Define sustainable animal agriculture utilizing the philosophies relative to sustainable agriculture.
2. Explain the differences among sustainable livestock product classifications.
3. Articulate both sides of the contemporary issues affecting the animal production industries (both sustainable and the traditional animal systems) today.
4. Identify resources necessary for successful sustainable agricultural production systems with animals.
5. Cite examples of sustainable animal agricultural models that are currently in use for any of the domestic species of livestock.
6. Describe how sustainable animal agriculture and animal management practices are inter-linked.
7. Explain the challenges faced in sustainable animal agriculture systems.
8. List principles that are critical to enhancing the profitability of sustainability in agricultural practices both locally and globally.

Topics and Scope:

I.Sustainable Animal Agriculture
- A. Definition of sustainable agriculture
- B. Components
  1. Economics
  2. Environmental
  3.Ethical
  4.Social
  5.Product
- C.Role of livestock
  1. Food
     a. Meat
     b. Dairy products
     c. Eggs
  2. Fiber
  3. Fuel
  4. Draft
  5. Eco-system management
     a. Fertility enhancement for soils via manure
     b. Utilization of livestock within cropping rotations
     c. Role of livestock in Intergrated Pest Management on farms (IPM)
- D. Product Classifications
  1. Natural
  2. Organics
  3. Pastured / Grass fed
  4. Free range
  5. Hormone free
  6. Non-Genetically Modified Organs (GMO)
  7. Biodynamic
- E. Animal welfare

II.Resources
- A. acreage
  1. Ownership
  2. Leasing
- B. Fences
  1. Permanent
  2. Temporary
  3. Electrical
- C. Facilities
- D. Labor
- E. Financial resources
- F. Agency cost-sharing opportunities
  1. Natrual Resource Conservatiions Service (NRCS)
  2. Conservation districts
- G. Advisors
- H. Equipment
  1. Tools
  2. Machinery
  3. Consumers

III.Challenges

A. Physical attributes of property
B, Noxious weeds
C. Soil
D. Water
1. Sufficiency
2. Legal water rights
3. Pollution versus production
E. Air
1. Pollution versus production
2. Greenhouse gases
F. Laws
1. Zoning
2. Certifications
3. Regulations
G. Processing
H. Distribution
1. Waste management
2. Efficiency of production

IV. Livestock
A. Species
B. Breeds
1. Rare
2. Endangered
3. Commercial
4. Purebred versus crossbreds
5. Registered versus grade
C. Acquisition
1. Ownership
2. Leasing
D. Shelter
E. Breeding management
F. Health management
1. Disease
2. Parasites
G. Nutrition management
H. Manure management
I. Predator protection

V.Financial Consideration
A. Cost of production
1. Efficiency
B. Where to market
1. Auction yard
2. Internet
3. Farmer’s market
4. Live farm gate sales
5. Restaurant
C. Advertising
D. Cost effectiveness

VI.Local versus Global Perspective
A. Food supply
B. Human development
1. Income

2. Employment
3. Energy generation
4. Ecosystem management
5. Marginal lands and crop residue

Assignment:

1. Reading assignments average minimum 30 pages per week.
2. Writing assignments: reports, worksheets, and written essay exams.
3. Quizzes, midterm and final.
4. Term paper of 5 to 7 pages.
5. Field work including measuring animal management practices

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework, reports and term paper	Writing 20 - 30%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, worksheets	Problem solving 10 - 20%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Field work including measuring animal management practices	Skill Demonstrations 10 - 20%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes mid-term and final: multiple choice, true/false, matching items, completion. And essay exams	Exams 40 - 60%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:

Dagget, Dan. Gardeners of Eden; Rediscovering Our Importance To Nature. The Thatcher Charitable Trust Publisher. 2005 (Classic)
Dagget, Dan. Beyond The Rangeland Conflict - Toward a West That Works. Gibbs-Smith Publisher, Layton, UT. 1995 (Classic)
Gliessman, Stephen r. Agroecology: Ecological Processes in Sustainable Agriculture. Lewis

Publishers. 2000 (Classic)
Peart, Robert M. and W. David Shoup. Agricultural Systems Management: Optimizing Efficiency and Performance. Marcel Dekker Publisher. 2004 (Classic)
Berry, Wendell. . Chapter 8, “Jefferson, Morrill and the Upper Crust.” from The Unsettling of America - Culture and Agriculture. 2nd Edition. Sierra Club Books, San Francisco, CA. 1986 (Classic)
Raeburn, Paul. . The Last Harvest - The Genetic Gamble that Threatens to Destroy American Agriculture. University of Nebraska Press, Lincoln, NE.1996 (Classic)
Sayre, Nathan F. The New Ranch Handbook: A Guide to Restoring Western Rangelands. 1st Edition. The Quivira Coalition books, Santa Fe, NM. 2001 (Classic)
Hawken, P. A. Lovins, & L. H. Lovins. Natural Capitalism: Creating the Next Industrial Revolution. 1st Edition. Little, Brown and Co. New York, NY. 2004 (Classic)
Provenza, Frederick D. Foraging Behavior: Managing to Survive in a World of Change. USU Press. 2003 (Classic)